

REMARKS

Applicant requests reconsideration of the application in view of the foregoing amendments and the discussion that follows. The status of the claims as of this response is as follows: Claims 1-18 are pending and claims 19-31 have been withdrawn. Applicant reserves the right to file divisional applications to the separately patentable subject matter thereof. Claims 1, 10, 19 and 26 have been amended herein. Withdrawn claims 19 and 26 have been amended herein to make them depend from apparatus claims thereby preserving Applicant's ability for rejoinder of these claims in accordance with the provisions of MPEP §821.04.

The Amendments

Claim 1 was amended to recite that the first electrode is on a substrate and that the resistive material is disposed on the substrate adjacent the first electrode and between the first electrode and a second electrode disposed adjacent the pad. Support therefor is in the specification, for example, original claim 3 and Figure 2.

Claim 10 was amended to provide for proper reference back to claim 1, from which claim 10 depends.

Claims 19 and 26 were amended to depend from claim 1 as discussed above.

Rejection under 35 U.S.C. §102

Claims 1-4, 7-14, and 17-18 were rejected under paragraph (b) of the above code section as being anticipated by Matsue, *et al.* (U.S. Patent No. 5,866,321) (Matsue). The Office Action asserts that, with regard to claim 1, Matsue teaches a device comprising a first electrode, and pad of resistive material disposed adjacent the first electrode, e.g., a layer of carbon ink (referring to col. 9, lines 61-63, of the reference) or gold (referring to col. 10, line 23, of Matsue), a second electrode disposed adjacent the pad, and a probe supported on the pad (referring to col. 9, line 55, to col. 10, line 25, and Figures 1A and 1B, of the reference).

Without acquiescing in the assertions in the Office Action, Applicant submits that Matsue does not disclose or suggest each and every element of claim 1. The device of claim 1 includes the limitation that a pad of resistive material is disposed on a substrate between a first electrode on the substrate and a second electrode and that probes are supported on the pad of resistive material. Matsue does not disclose or suggest a pad of resistive material on a substrate between the first and second

electrodes. In Matsue, the substrate 1, which the Office Action appears to identify as a pad of resistive material, is not on a substrate as recited in the present claim. Furthermore, the substrate, which the Office Action identifies as the pad of resistive material, does not lie between the first electrode and the second electrode as recited in claim 1. In Matsue, substrate 1 lies under the electrodes. In addition, the reactants in Matsue are on the supporting electrodes, not on either substrate 1 of the reference or, as recited in claim 1, the pad of resistive material. If the insulating material or substrate 1 of the reference is considered to be a pad of resistive material (as is required in claim 1), then, Matsue fails to disclose or suggest a substrate (as required in claim 1). If the insulating material is a substrate (as required in claim 1), then the disclosure of Matsue lacks a teaching of a pad of resistive material. In either event, there is no disclosure of a pad of resistive material between the two electrodes or of probes supported on a pad of resistive material.

Claim 2 is patentable over Matsue at least in view of its dependency from claim 1, which, as demonstrated above, is patentable over Matsue.

Claim 3 is not disclosed or suggested by the Matsue reference even if, as asserted in the Office Action, Matsue teaches a combined device (referring to col. 14, lines 19-20). The combined device of the reference does not have a pad of resistive material disposed on a substrate between a first electrode on the substrate and a second electrode on the substrate where probes are supported on the pad of resistive material.

With regard to claim 4, since Matsue does not disclose or suggest a device having a pad of resistive material disposed on a substrate between a first electrode on the substrate and a second electrode on the substrate where probes are supported on the pad of resistive material, Matsue cannot disclose a gap between the pad and at least one of the first electrode and the second electrode as set forth in claim 4. Furthermore, the combined device of Matsue has an analyzing part (shown on the bottom in the figures) and a detecting part (shown on the top in the figures). The detecting part comprises a signal generation-related portion 4x or a detector or electrode portions 4y for detecting signals originating from the analyte. Neither the analyzing part or the detecting part identified in the reference shows or suggests the device as claimed in claim 4.

Claim 7 is patentable over the Matsue reference for reasons similar to those discussed above with respect to claim 4.

Matsue does not disclose or suggest the device of claim 8, wherein certain materials are recited for the pad of resistive material. The Office Action refers to Matsue's mention of layer of carbon ink at col. 9, lines 61-63. However, at the cited passage, the patentee is referring to electrodes each having a conductive layer formed of a semiconductor, metal, carbon ink, etc. There is no disclosure or suggestion regarding a pad of resistive material.

Claims 9-12 are patentable over Matsue at least in view of their respective dependency ultimately from claim 1, which, as demonstrated above, is patentable over Matsue.

Claim 13 is not disclosed or suggested by the Matsue reference. Claim 13 recites that at least a plurality of the first electrodes of the plurality of devices are in electrical communication with a common bus disposed on or in the substrate. The passages cited in the Office Action at col. 10, lines 19-20, and col. 14, lines 19-20, do not contain any disclosure or suggestion of a common bus as recited in claim 13.

With regard to claim 14, since Matsue does not disclose or suggest a device having a pad of resistive material disposed on a substrate between a first electrode on the substrate and a second electrode where probes are supported on the pad of resistive material, Matsue cannot disclose a gap between the pad and at least one of the first electrode and the second electrode as set forth in claim 14.

Claims 17 and 18 are patentable over Matsue at least in view of their respective dependency ultimately from claim 1, which, as demonstrated above, is patentable over Matsue.

Claims 1-5, 7-13, 15, and 17-18 were rejected under 35 U.S.C. 102(b) as being anticipated by Eggers, *et al.* (U.S. Patent No. 5,532,128) (Eggers). The Office Action asserts that Eggers teaches a device comprising a first electrode, a pad of resistive material disposed adjacent the first electrode (referring to Figures 2a and 2b, wherein the Office Action contends that the resistive layer is a metal linker layer referring to col. 8, lines 28-32), a second electrode disposed adjacent the pad, and a probe supported on the pad (referring to col. 4, lines 52-60, and Figures 2a and 2b).

Without acquiescing in the assertions in the Office Action, Applicant submits that Eggers does not disclose or suggest each and every element of claim 1. The device of claim 1 includes the limitation that the pad of resistive material is disposed on the substrate between the first electrode and the second electrode. Even if for the sake of argument one were to accept the contentions in the Office Action regarding the

disclosure of Eggers (which Applicant does not), the reference does not disclose or suggest a pad of resistive material on the substrate between the first and second electrodes. In Eggers, the metal linker layer, which the Office Action identifies as a pad of resistive material, is not on a substrate as recited in the present claim. Rather, in Eggers the metal linker layer is on electrode plates 24 a, 24b. Furthermore, the metal layer, which the Office Action identifies as the pad of resistive material, does not lie between the first electrode and the second electrode as recited in claim 1.

Regarding claim 2, the Office Action argues that Eggers teaches the device of claim 1, wherein the probe is supported on at least one of the first electrode and the second electrode (referring to col. 4, lines 45-46, and Figure 2a). However, the Office Action, in the rejection of claim 1, asserts that the probes are on the metal linker layer, which the Office Action has identified as the pad of resistive material. In any event, claim 2 is patentable over Eggers by virtue of its dependency from claim 1, which is patentable over Eggers as demonstrated above.

The Office Action contends that Eggers teaches the device of claim 1, wherein the first electrode, the second electrode and the pad are supported on a substrate (referring to Figures 2a and 2b) as recited in claim 3. However, in the rejection of claim 1, the Office Action contends that the resistive layer is a metal linker layer (referring to col. 8, lines 28-32), which is used to attach probes. As indicated in the cited passage, the metal linker layer is on electrode plates 24 a, 24b. Therefore, there is no disclosure or suggestion in Eggers of a pad of resistive material on the substrate of Eggers.

With regard to claim 4, since Eggers does not disclose or suggest a device having a pad of resistive material disposed on a substrate between a first electrode on the substrate and a second electrode on the substrate where probes are supported on the pad of resistive material, Eggers cannot disclose a gap between the pad and at least one of the first electrode and the second electrode as set forth in claim 4.

The Office Action asserts that Eggers teaches the device of claim 3, wherein the first electrode and the second electrode physically contact the pad (referring to Figure 2b, wherein the resistive layer is a metal linker layer; column 8, lines 28-32) as recited in claim 5. However, as explained above, the metal linker layer of the reference is not on the substrate and is not between the first and second electrodes.

Without acquiescing in the arguments advanced in the Office Action, Claims 7-13, 15, 17 and 18 are patentable over Eggers at least in view of their respective

dependency ultimately from claim 1, which, as demonstrated above, is patentable over Eggers.

Rejection under 35 U.S.C. §103

Claims 6 and 16 were rejected under paragraph (a) of the above code section as being unpatentable over Matsue in view of Kittlesen, *et al.* (J. Am. Chem. Soc., vol. 106, pp. 7389-7396 (1984)) (Kittlesen).

Without acquiescing in the arguments advanced in the Office Action, Claims 6 and 16 are patentable over Matsue in view of Kittlesen at least in view of their respective dependency ultimately from claim 1, which, as demonstrated above, is patentable over Matsue. The deficiencies of Matsue are enumerated above and the secondary reference (Kittlesen) does not cure these deficiencies. Accordingly, the combined teachings of Matsue and Kittlesen do not suggest the device of claim 6 or the microarray of claim 16.

Claims 6 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Eggers in view of Kittlesen.

Without acquiescing in the arguments advanced in the Office Action, Claims 6 and 16 are patentable over the combination of Eggers and Kittlesen at least in view of their respective dependency ultimately from claim 1, which, as demonstrated above, is patentable over Eggers. The deficiencies of Eggers are enumerated above and Kittlesen does not cure these deficiencies. Accordingly, the combined teachings of Eggers and Kittlesen do not suggest the device of claim 6 or the microarray of claim 16.

Claims 5 and 15 were rejected under paragraph (a) of the above code section as being unpatentable over Matsue in view of Eggers.

Without acquiescing in the arguments advanced in the Office Action, Claims 5 and 15 are patentable over the combination of Matsue and Eggers at least in view of their respective dependency ultimately from claim 1, which, as demonstrated above, is patentable over both Matsue and Eggers. The deficiencies of Matsue and Eggers are enumerated above and neither reference cures the deficiencies of the other. Accordingly, the combined teachings of Matsue and Eggers do not suggest the device of claim 5 or the microarray of claim 15.

Claim 14 was rejected under 35 U.S.C. 103(a) as being unpatentable over Eggers in view of Mansky, *et al.* (U.S. Patent No. 6,535,822) (Mansky).

Without acquiescing in the arguments advanced in the Office Action, Claim 14 is patentable over the combination of Eggers and Mansky at least in view of its dependency ultimately from claim 1, which, as demonstrated above, is patentable over Eggers. The deficiencies of Eggers are enumerated above and Mansky does not cure those deficiencies. Accordingly, the combined teachings of Eggers and Mansky do not suggest the microarray of claim 14.

Conclusion

Claims 1-18 satisfy the requirements of 35 U.S.C. §§102 and 103. Allowance of the above-identified patent application, it is submitted, is in order.

Respectfully submitted,



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